

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

ASCENTCARE DENTAL PRODUCTS, INC.,
Petitioner

v.

SOLMETEX, LLC
Patent Owner

Patent No. 11,589,969

Case No. IPR2025-01020

**PATENT OWNER'S REPLY IN SUPPORT OF DISCRETIONARY
DENIAL**

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LISTING OF EXHIBITS

Exhibit No.	Description
2001	U.S. Patent Publication No. 2009/0274991 to Black
2002	U.S. Patent No. 1,731,322 to Riddle (“Riddle”)
2003	U.S. Patent No. 4,083,115 to McKelvey (“McKelvey”)
2004	International Publication No. WO 2011/014952 to Maycher (“Maycher”)
2005	U.S. Patent Publication No. 2006/0063129 to Hirsch (“Hirsch ‘129”)
2006	Patent Owner’s May 17, 2023 Infringement Notice Letter to Petitioner
2007	First Case Management Order, <i>Solmetex, LLC v. Ascentcare Dental Products, Inc.</i> , Case No. 1:24-cv-00954-RJJ-MV, ECF No. 20 (Apr. 22, 2025)
2008	Defendant/Counter-Plaintiff Ascentcare Dental Products, Inc.’s Brief in Support of Motion to Stay, <i>Solmetex, LLC v. Ascentcare Dental Products, Inc.</i> , Case No. 1:24-cv-00954-RJJ-MV, ECF No. 38 (Jul. 11, 2025)
2009	Declaration of Nathan P. Sportel in Support of Defendant/Counter-Plaintiff’s Motion to Stay, <i>Solmetex, LLC v. Ascentcare Dental Products, Inc.</i> , Case No. 1:24-cv-00954-RJJ-MV, ECF No. 39 (Jul. 11, 2025)
2010	Plaintiff/Counter-Defendant Solmetex, LLC’s Opposition to Ascentcare’s Motion to Stay, <i>Solmetex, LLC v. Ascentcare Dental Products, Inc.</i> , Case No. 1:24-cv-00954-RJJ-MV, ECF No. 41 (Jul. 25, 2025)
2011	Defendant/Counter-Plaintiff Ascentcare Dental Products,

	Inc.’s Invalidity Contentions Cover Pleading, <i>Solmetex, LLC v. Ascentcare Dental Products, Inc.</i> , Case No. 1:24-cv-00954-RJJ-MV, served July 18, 2025
2012	Defendant/Counter-Plaintiff Ascentcare Dental Products, Inc.’s Invalidity Contentions Claim Chart for the ‘969 Patent, <i>Solmetex, LLC v. Ascentcare Dental Products, Inc.</i> , Case No. 1:24-cv-00954-RJJ-MV, served July 18, 2025
2013	DocketNavigator Statistics, Western District of Michigan
2014	Email dated June 3, 2025 from Counsel for Solmetex to Counsel for Ascentcare
2015	Defendant/Counter-Plaintiff Ascentcare Dental Products, Inc.’s Non-Infringement Contentions, <i>Solmetex, LLC v. Ascentcare Dental Products, Inc.</i> , Case No. 1:24-cv-00954-RJJ-MV, served July 18, 2025
2016	Declaration of Professor Charles A. Garris, Ph.D.
2017	<i>Curriculum vitae</i> of Professor Charles A. Garris, Ph.D.
2018	DryShield User Guide
2019	Petition for <i>Inter Partes</i> Review of U.S. Patent No. 12,290,418 (IPR2025-01175)
2020	Merriam-Webster Dictionary (“wave”)
2021	Merriam-Webster Dictionary (“crest”)
2022	Merriam-Webster Dictionary (“trough”)
2023	Dow Chemical Company, Silicone Rubber Selection Guide
2024	Excerpt from Ascentcare’s Proposed Claim Constructions and Extrinsic Evidence, <i>Solmetex, LLC v. Ascentcare Dental Products, Inc.</i> , Case No. 1:24-cv-00954-RJJ-MV, served Sept.

	16, 2025
2025	Excerpt from Solmetex's Preliminary Proposed Claim Constructions and Identification of Extrinsic Evidence, <i>Solmetex, LLC v. Ascentcare Dental Products, Inc.</i> , Case No. 1:24-cv-00954-RJJ-MV, served Sept. 16, 2025
2026	Excerpts from Prosecution History of U.S. Patent No. 11,744,686 (Ex. 1020 in IPR2025-01059)
2027	Order Denying Motion to Stay, <i>Solmetex, LLC v. Ascentcare Dental Products, Inc.</i> , Case No. 1:24-cv-00954-RJJ-MV, ECF No. 54 (Sept. 3, 2025)

Pursuant to authorization from the Board, Patent Owner submits this Reply in support of its discretionary denial brief. EX3101.

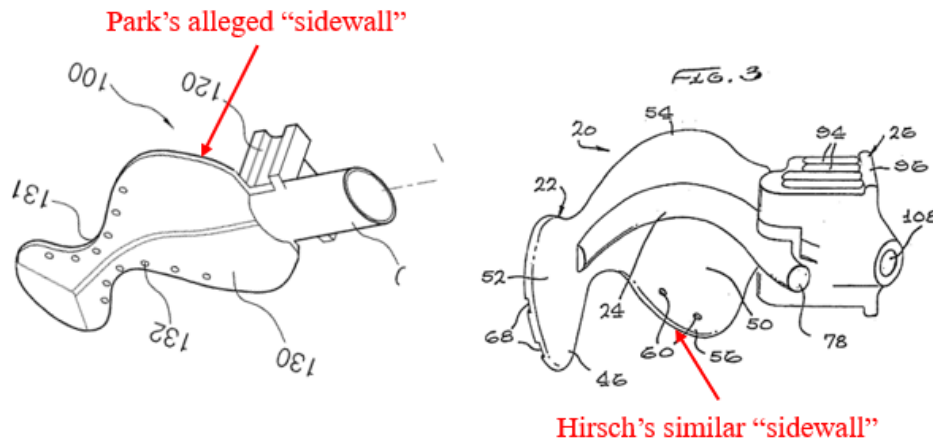
I. DISCRETIONARY DENIAL IS WARRANTED UNDER § 325(d)

Park is Cumulative The only dispute under part 1 of the *Advanced Bionics* framework is whether Park is cumulative. Petitioner argues that “none of the [considered] prior art ... shows a four-sided dental isolation mouthpiece,” but that is irrelevant because none of the challenged require this. Paper 7 at 7. Park is cumulative of (1) Hirsch, (2) Black, and/or (3) the Examiner's Maycher/Hirsch '129 combination (which Petitioner does not even address). Paper 6 at 15-21.

Petitioner doubles down on its claim that Park is not cumulative because it allegedly has “sidewalls.” Paper 7 at 7. This is a red herring. The full prosecution history, including the Notice of Allowance, is clear that the presence or absence of a “sidewall” had nothing to do with why the claims were allowed. Paper 6 at 22-28; EX1021, 300. Rather, the claims were allowed because they recite a “bridge structure” with a “wave shape” that is not taught in the prior art considered during prosecution or the references in the Petition. *Id.* Petitioner's insistence that Park is not cumulative because it shows “sidewalls” is untethered from the facts.

Moreover, Park does not expressly discuss “sidewalls.” Petitioner *assumes* Park has them based solely on the drawings. *See* EX1003, ¶124. For Hirsch, Petitioner accuses Patent Owner of taking inconsistent positions with respect to

whether it has “sidewalls.” Paper 7 at 7-9. Petitioner misses the point: if Petitioner’s assumption about Park’s figures is correct, then Hirsch similarly illustrates a “sidewall” in its figures, confirming Park’s cumulateness:



Petitioner has no substantive response to this and instead resorts to mischaracterizing the file history. Petitioner points to an argument that element 54 in Hirsch is not a “side wall” but ignores the context. Paper 6 at 8-9 (citing EX1002, 484-85). The arguments were directed to newly claimed details on the inferior/superior walls (which are not in the challenged claims), including a defined “span” and a “plurality of perforations” that Hirsch lacks. EX1002, 479-80 (claims), 438-84 (argument). Petitioner also claims that Patent Owner previously argued “that Hirsch ‘fails to teach any defined walls spanning across set distances as does the claimed superior and inferior [side]walls.’” Paper 7 at 9 (quoting EX1020, 254-55). But the language quoted by Petitioner does not appear on the cited pages of the file history. In any event, Petitioner ignores that the Applicant was again focused on additional claimed details for the inferior/superior wall. EX1020, 254-55.

For Black, Petitioner ignores that under its own analysis, Black discloses *more* than Park. Paper 6 at 17-18. Petitioner again resorts to mischaracterizing the issues by claiming “Patent Owner argues that Park is cumulative of Black because Black teaches sidewalls” and that “Patent Owner spent years telling the Office that Black does not teach sidewalls.” Paper 7 at 9-10. Not true. Patent Owner merely observed that “*the Examiner* found ... that Black discloses a ‘sidewall.’” Paper 6 at 18. The prosecution history is clear that the claims were patentable over Black because Black lacks the claimed “bridge structure” with a “wave shape,” which Petitioner concedes Park also lacks. Paper 6 at 25-28; EX1021, 300.

No Material Error Petitioner has not met its burden to show that “the previously presented art teaches the limitations of the challenged claims, and that no reasonable examiner could have found otherwise.” *Ecto World, LLC v. RAI Strategic Holdings, Inc.*, IPR2024-01280, Paper 13 at 5-6 (PTAB May 19, 2025). Petitioner argues that the Office erred by not rejecting claim 19 because it does not use the word “unattached” in relation to the bridge structure and the Examiner “did not remember” his initial rejection in the Parent ‘232 Patent. Paper 7 at 11-13. This argument ignores what actually happened. After more carefully considering Black for a §102 rejection, the Examiner found that Black does *not* disclose a “bridge structure” with a “wave shape.” EX1015, 109-11. This is clear because the Examiner

added the term “wave shape” (but not the word “unattached”) to the claims via Examiner’s amendment when allowing the Parent ‘232 Patent. *Id.*, 145-48.

Petitioner next argues that the Examiner erred “by not considering that the claimed ‘wave-shape’ of the bridge structure could be taught by a square wave shape.” Paper 7 at 13. Petitioner’s position that “any shape that alternates between crests and troughs is necessarily a ‘wave shape’” (Paper 7 at 14) is incorrect because it strips the phrase “wave shape” of any meaning and inconsistent with the specification (Paper 8 at 19-32). Petitioner points to instances where the Office incorrectly stated that Black has a “wave shape” with regard to dependent claims in other applications. Paper 7 at 15. However, Petitioner provides only limited excerpts from these file histories that omit the responses. Patent Owner has been consistent in its interpretation of the “wave shape” requirement. *See, e.g.*, EX2026, 369-70.

There was no “oversight” or “error” by the Examiner: he correctly determined that Black does not have a “wave shape” during prosecution of the Parent ‘232 Patent and maintained the same position for the ‘969 Patent. The prosecution history for this patent family shows there were at least two bases for overcoming Black: (1) Black’s transverse walls are not “unattached” and (2) they do not form a “wave shape.” This is why the Examiner allowed claim 19 even though it does not expressly use the word “unattached.” Petitioner has not shown that “no reasonable examiner” would have allowed the claims for this reason. *Ecto World*, Paper 13 at 5-6.

II. THE *FINTIV* FACTORS FAVOR DISCRETIONARY DENIAL

The Director should deny institution due to the advanced stage of the Parallel Litigation relative to the projected institution and final written decision deadlines, which is proceeding under the schedule Petitioner agreed to. Paper 6 at 34-38. Moreover, the district court denied Petitioner's motion to stay. EX2027, 4-6.

Petitioner argues that its *Sotera* stipulation means "there will be no overlap of invalidity issues between the District Court litigation and IPR." Paper 7 at 24. Not true. The stipulation is limited to grounds based on "prior art patents or printed publications." EX1029, 5. Petitioner's invalidity contentions cite the "Isolite" and "Mr. Thirsty" products, which are commercial embodiments of Hirsh and Black, respectively. Paper 6 at 39; EX1003, ¶¶1-10, 17-18.¹ Petitioner's stipulation does not prevent it from relitigating this IPR through the Isolite and Mr. Thirsty products. *See Ingenico Inc. v. IOENGINE, LLC*, 136 F.4th 1354, 1366 (Fed. Cir. 2025). Additionally, Petitioner's invalidity contentions are more expansive than the Petition, and Petitioner does not address Patent Owner's cited cases finding that this weighs against institution despite its *Sotera* stipulation. Paper 6 at 39.

¹ Zyris, Inc.'s webpage indicates that the Isolite products are covered by Patent No. 6,974,312, which is the issued version of Hirsch. <https://www.zyris.com/patents/>.

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Patent Owner's Reply ISO Discretionary Denial

Respectfully submitted,

Dated: September 24, 2025

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CERTIFICATE OF SERVICE

The undersigned hereby certifies that a copy of the foregoing **Patent Owner's Reply Brief in Support of Discretionary Denial** was served on September 24, 2025, by email:

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